LISTING OF THE CLAIMS

Claims 1-39. (Canceled)

Claim 40. (New): An optical recording method for recording mark length-modulated information with a plurality of recording mark lengths by irradiating a recording medium with a light, the optical recording method comprising the steps of:

when a time length of one recording mark is denoted nT (T is a reference clock period equal to or less than 25 ns, and n is a natural number equal to or more than 2),

dividing the time length of the recording mark nT into

$\eta_1 T, \alpha_1 T, \beta_1 T, \alpha_2 T, \beta_2 T, ..., \alpha_i T, \beta_i T, ... \alpha_m T, \beta_m T, \eta_2 T$

in that order (m is a pulse division number; $\Sigma_i(\alpha_i + \beta_i) + \eta_1 + \eta_2 = n$; α_i ($1 \leq i \leq m$) is a real number larger than 0; β_i ($1 \leq i \leq m-1$) is a real number larger than 0; β_m is a real number larger than or equal to 0; and η_1 and η_2 are real numbers between -2 and 2);

radiating recording light with a recording power Pw_i in a time duration of $\alpha_i T$ ($1 \leq i \leq m$); and

radiating recording light with a bias power Pb_i in a time duration of $\beta_i T$ ($1 \leq i \leq m-1$), the bias power being $Pb_i < Pw_i$ and $Pb_i < Pw_{i+1}$;

wherein the pulse division number m is 2 or more for the time duration of at least one recording mark and meets $n/m \geq 1.25$ for the time length of all the recording marks,

further wherein when the same pulse division number m is used on at least two recording marks with different n values, said at least two recording marks are formed by changing at least one of pulse time of $(\alpha_1 + \beta_1)$, $(\alpha_2 + B_1)$, $(\alpha_m + \beta_{m-1})$ and $(\alpha_m + \beta_m)$ or changing one of duty ratio of $(\alpha_i/(\alpha_i + \beta_i))$ and $(\alpha_i/(\alpha_i + \beta_{i-1}))$.

Claim 41. (New): An optical recording method according to Claim 40, wherein when the same pulse division number m is used on two recording marks of which length difference is 1T, said two recording marks are formed by changing at least two of α_1, β_1, α_2, β_{m-1}, α_m, and β_m

Claim 42. (New): An optical recording method according to Claim 41, wherein said two recoding marks are formed by changing at least one of β_1, β_{m-1}, and β_m.

Claim 43. (New): An optical recording method according to Claim 40, wherein Pw_i and Pb_i are represented by Pw and Pb respectively for all the value n and the value i where i is $1 \leq i \leq m$.

Claim 44. (New): An optical recording method according to Claim 40, wherein $\alpha_i + \beta_i$ ($2 \leq i \leq m-1$) or $\beta_{i-1} + \alpha_i$ ($2 \leq i \leq m-1$) is a constant value independently of said real number i.

Claim 45. (New): An optical recording method according to Claim 44, wherein $\alpha_i + \beta_i$ ($2 \leq i \leq m-1$) or $\beta_{i-1} + \alpha_i$ ($2 \leq i \leq m-1$) is 2 independently of said real number i.

Claim 46. (New): An optical recording method according to Claim 40, wherein α_i is kept almost constant as a constant value αc where said i is ($2 \leq i \leq m-1$).

Claim 47. (New): An optical recording method according to Claim 40, wherein α_i

($2 \leq i \leq m-1$) is kept almost constant for the recording marks with the pulse division number of not less than 3.

Claim 48. (New): An optical recording method according to Claim 40, wherein when performing a mark length modulation scheme recording on the same recording medium by using a plurality of linear velocities v while keeping v x T constant,

for m equal to or greater than 2, $(\alpha_i + \beta_i)$ in $2 \leq i \leq m-1$ is kept constant independently of the linear velocity, Pw_i, Pb_i and Pe in each i are kept almost constant independently of the linear velocity, and α_i ($2 \leq i \leq m-1$) is decreased as the linear velocity lowers.

Claim 49. (New): An optical recording method according to Claim 40, wherein when performing a mark length modulation scheme recording on the same recording medium by using a plurality of linear velocities v while keeping v x T constant,

for m equal to or greater than 2, $(\beta_{i-1} + \alpha_i)$ in $2 \leq i \leq m$ are kept constant independently of the linear velocity, Pw_i, Pb_i and Pe in each i are kept almost constant independently of the linear velocity, and α_i ($2 \leq i \leq m$) are decreased as the linear velocity lowers.

Claim 50. (New): An optical recording method according to Claims 48 or 49, wherein α_{iT} ($2 \leq i \leq m-1$) are kept almost constant independently of the linear velocity.